

Combined Preliminary-Detailed Design of Wind Turbines

Replies to Editor in Chief

Thank you for your comments to our work. We have now modified the manuscript, as detailed in the following:

1. **[Reviewer]** *Several references are not easily accessible through a link or a DOI. Among those are: Bottasso C.L., Croce A.: Cp-Lambda: User's Manual, Dipartimento di Scienze e Tecnologie Aerospaziali, Politecnico di Milano, 2006–2016, but there are many more. Please find links to those (particularly manuals, conference papers, reports), such that the readers can easily access that material.*

[Authors] We have eliminated the reference to Cp-Lambda's user's manual. We have provided doi for all papers, when available. We have refrained from providing links, as these are typically temporary and they might not be necessarily available in the future.

2. **[Reviewer]** *A direct link to Chaviaropoulos InnWind Report (which is 1.23, not 1.2.3) must be present.*

[Authors] We have provided a link, as requested.

3. **[Reviewer]** *The associate editor expresses concern that the term "integrated optimization" is not technically completely correct. Add a sentence in the manuscript explaining the difference.*

[Authors] We do not completely agree with the statement of the Associate Editor. Our procedure is not monolithic (which would mean solving for all design variables in one shot), but it is indeed integrated. Integrated means that the disciplines are able to mutually influence themselves: a change in the aerodynamics is reflected in a change in the structures, and viceversa (and similarly for the controls). This is explained at length in the paper, initially in the introduction, then in great detail in the technical sections, and finally the concept is repeated again in the conclusions. In addition, our procedure is not sequential. The term "sequential" implies cascading effects from a step to the next, but not the opposite. This does not happen in our procedures: although certain steps are done in sequence (because this allows for a much greater computational efficiency than a monolithic one-shot approach), there is always in our algorithms the feedback effect of the later steps on the earlier ones. We have paid great attention in the formulation of the text to make these concepts as clear as possible, and we believe that the reader will be able to correctly appreciate this aspect of the formulation. This is also well captured by one of the sentences of the conclusions, which states: "Although broken down in sequential steps, the overall iterative procedure results in an integrated algorithm, where changes in any one discipline (aerodynamics, structures, controls) influences the others." There are numerous other parts in the text that explain this concept in a way that we believe is clear and accurate.

4. **[Reviewer]** *The sizes of the labels of the axes, the numbers on the axes and the legend in figures 3 to 10 are not large enough. Please adjust.*

[Authors] Size of the labels have now been changed.